

## List of Compulsory Course for 2021 Spring Semester

For Master's program

Subject	Registration Code	School	Center	Cr.
INDEPENDENT STUDY	08734	Fundamental Science and Technology	Mathematics	4
	08753		Physics	
	08442		Molecular Chemistry	
	08089		Applied Physics and Physico-Informatics	
	08476		Chemical Biology	
	08500		Biosciences and Informatics	
	09310	Integrated Design Engineering	Multidisciplinary and Design Science	
	09305		System Integration Engineering	
	09286		Electronics and Electrical Engineering	
	08859		Material Design Science	
	09324	Science for Open and Environmental Systems	Space and Environment Design Engineering	
	07647		Science of Environment and Energy	
	01285		Applied and Computational Mechanics	
	09343		Information and Computer Science	
	09358		Open Systems Management	
GRADUATE RESEARCH 1	01266	Fundamental Science and Technology	Mathematics	6
	02831		Physics	
	03292		Molecular Chemistry	
	10563		Applied Physics and Physico-Informatics	
	08749		Chemical Biology	
	09339		Biosciences and Informatics	
	10138	Integrated Design Engineering	Multidisciplinary and Design Science	
	02430		System Integration Engineering	
	02645		Electronics and Electrical Engineering	
	10381		Material Design Science	
	10525	Science for Open and Environmental Systems	Space and Environment Design Engineering	
	11024		Science of Environment and Energy	
	01103		Applied and Computational Mechanics	
	10783		Information and Computer Science	
	09874		Open Systems Management	

For Ph.D. program

Subject	Registration Code	School	Center	Cr.
GRADUATE RESEARCH 2	02808	Fundamental Science and Technology	Mathematics	6
	03269		Physics	
	03072		Molecular Chemistry	
	10635		Applied Physics and Physico-Informatics	
	08461		Chemical Biology	
	10343		Biosciences and Informatics	
	10487	Integrated Design Engineering	Multidisciplinary and Design Science	
	02463		System Integration Engineering	
	02721		Electronics and Electrical Engineering	
	10104		Material Design Science	
	10999	Science for Open and Environmental Systems	Space and Environment Design Engineering	
	10750		Science of Environment and Energy	
	01137		Applied and Computational Mechanics	
	11120		Information and Computer Science	
	04160		Open Systems Management	

## 2021 Course List for International Graduate Programs (April 2021 - March 2022)

Program	Code	Subject	Sem.	Cr.	Time	Room	Lecture Type	Professor
General Courses	09970	MACROECONOMIC DEVELOPMENTS AND ECONOMIC POLICY IN JAPAN	Fall	2	Wed/2	Online	③	SAITO, JUN
	09635	SCIENCE, TECHNOLOGY AND CULTURE	Fall	2	Mon/5	Online	③	IMOTO, YUKI
	09047	TECHNICAL COMMUNICATION 1	Spring	2	Web/1	Online	③	OHARA, KYOKO
	09028	TECHNICAL COMMUNICATION 1	Spring	2	Thu/2	Online	③	ISHIDA, MAKU
	09051	TECHNICAL COMMUNICATION 2	Fall	2	Wed/1	Online	③	OHARA, KYOKO
	03015	TECHNICAL COMMUNICATION 2	Fall	2	Thu/2	Online	③	ISHIDA, MAKU
Fundamental Science and Technology	12767	ADVANCED COURSE ON SPIN AND NANO-SCALED SOLIDSTATE PHYSICS	Spring Q2*1	2	Thu/2 Mon/5	Online	③	KAIJU, HIDEO KAMIHARA, YOICHI
		ANALYTICAL METHODS IN APPLIED PHYSICS AND INFORMATICS						Not offered in 2021
		CHEMISTRY AND DAILY LIFE						Not offered in 2021
		INFORMATION OPTICS AND OPTICAL MEASUREMENTS						Not offered in 2021
	02186	INTELLIGENT MACHINE SYSTEM	Fall	2	Mon/1,2	12/101	②	MURAKAMI, TOSHIYUKI
	00509	INTERNSHIP	Spring	2	-	-	-	HOSHINO, KAZUO
	00881	INTERNSHIP	Fall	2	-	-	-	HOSHINO, KAZUO
	00179	MATHEMATICAL ENGINEERING FOR QUANTUM MECHANICS	Spring	2	Thu/4	Online	③	YAMAMOTO, NAOKI
		NATURAL PRODUCTS CHEMISTRY						Not offered in 2021
	09640	NON-LINEAR DYNAMICS IN CHEMICAL SYSTEM	Spring	2	Tue/1	online	③	ASAKURA, KOICHI
		OPTICAL FUNCTIONAL MATERIALS						Not offered in 2021
		PHYSICS AND MODELING OF SEMICONDUCTOR DEVICES						Not offered in 2021
		PRACTICAL PRESENTATION IN CHEMISTRY 1						Not offered in 2021
		PRACTICAL PRESENTATION IN CHEMISTRY 2						Not offered in 2021
		QUANTUM ELECTRONICS						Not offered in 2021
		SEMINAR ON MODERN ORGANIC CHEMISTRY 1						Not offered in 2021
		SEMINAR ON MODERN ORGANIC CHEMISTRY 2						Not offered in 2021
		SUPERCONDUCTIVITY AND SOLID STATE ENGINEERING						Not offered in 2021
		SYSTEM BIOMECHANICS						Not offered in 2021
	08074	TOPICS IN APPLIED PHYSICS A	Spring	2	Fri/4	Online	③	ITO, KOHEI KAMINISHI, ERIKO
		TOPICS IN CARBOHYDRATE CHEMISTRY						Not offered in 2021
		TOPICS IN ORGANOCATALYSIS						Not offered in 2021
Integrated Design Engineering	11593	ADVANCED CONTROL SYSTEMS DESIGN	Spring	2	Mon/2	Online	③	OHMORI, HIROMITSU NAMERIKAWA, TORU
	12771	ADVANCED COURSE ON SPIN AND NANO-SCALED SOLIDSTATE PHYSICS	Spring Q2*1	2	Thu/2 Mon/5	Online	③	KAIJU, HIDEO KAMIHARA, YOICHI
	07939	ADVANCED DESIGN AND PRODUCTION SYSTEM	Spring	2	Mon/3	Online	③	OYA, TETSUO
	00217	ADVANCED SIGNAL PROCESSING	Spring	2	Wed/1	online	③	YUKAWA, MASAHIRO
	00221	ADVANCED SYSTEM ELECTRONICS	Fall	2	Tue/2	online	③	KUBO, RYOGO
	01290	BIOMIMETIC MICRO/NANO ENGINEERING	Spring	2	Mon/3	online	③	TAKAHASHI, HIDETOSHI
	11665	CHEMICAL SENSORS / BIOSENSORS AND SENSING MATERIALS	Spring	2	Tue/2	Online	③	CITTERIO, DANIEL
	08347	COMPUTER ARCHITECTURE	Spring	2	Thu/1	Online	③	AMANO, HIDEHARU
	08662	COMPUTER VISION	Spring	2	Mon/5	online	③	SAITO, HIDEO
	07063	DIGITAL WIRELESS COMMUNICATIONS	Spring	2	Mon/2	online	③	SANADA, YUKITOSHI
		FUNCTIONAL THIN FILM ENGINEERING						Not offered in 2021
		INFORMATION OPTICS AND OPTICAL MEASUREMENTS						Not offered in 2021
	07943	INTELLIGENT MACHINE SYSTEM	Fall Q1*1	2	Mon/1,2	12/101	②	MURAKAMI, TOSHIYUKI
	00843	INTERNSHIP	Spring	2	-	-	-	AOYAMA, HIDEKI
	00896	INTERNSHIP	Fall	2	-	-	-	
	08863	INTRODUCTION TO COMPUTATIONAL SOLID MECHANICS	Spring	2	Tue/2	12/103	②	ISAKARI, HIROSHI
	11627	LASER PROCESSING	Fall	2	Mon/3	11/16	②	TERAKAWA, MITSUHIRO
	06880	MATHEMATICAL AND PHYSICAL METHODS IN FLUID DYNAMICS	Spring	2	Tue/1	14/211	②	SAWADA, TATSUO
	01983	MECHANICAL INTERFACE DESIGN	Fall	2	Thu/3	online	③	MORITA, TOSHIO
	02129	MEMS: DESIGN AND FABRICATION	Spring	2	Thu/2	online	③	MIKI, NORIHISA TAKAHASHI, HIDETOSHI
	08131	NANO-ELECTRONICS	Fall	2	Tue/4	Online	③	MATSUHIRA, NAOJI
	09654	NON-LINEAR DYNAMICS IN CHEMICAL SYSTEM	Spring	2	Tue/1	online	③	ASAKURA, KOICHI
	10142	OPTICAL CONTROL OF QUANTUM SYSTEMS	Spring	2	Wed/2	online	③	SAIKI, TOSHIHARU, FONS, PAUL J.
		OPTICAL FUNCTIONAL MATERIALS						Not offered in 2021
	09453	OPTICAL NETWORK SYSTEM	Fall	2	Fri /2	online	③	TSUDA, HIROYUKI
	07651	OPTO-ELECTRONICS	Spring	2	Thu/1	online	③	KANNARI, FUMIHIKO
	11631	ORGANIC ELECTRONIC MATERIALS AND DEVICES	Spring	2	Fri/1	online	③	NODA, KEI
	07958	PHOTONIC NANOSTRUCTURE	Spring	2	Tue/5	12/207	②	TANABE, TAKASUMI
		PHYSICS AND MODELING OF SEMICONDUCTOR DEVICES						Not offered in 2021
	00202	SPACE EXPLORATION ENGINEERING	Fall	2	Fri/2	14/201	②	ISHIGAMI, GENYA
		SPECIAL TOPICS ON ENGINEERING FOR SYNTHESIS AND DESIGN B						Not offered in 2021
		SYSTEM BIOMECHANICS						Not offered in 2021
	02114	ULTRAPRECISION MACHINING AND METROLOGY	Fall	2	Mon/2	online	③	YAN, JIHWANG
Science for Open and Environmental Systems	02956	AD HOC AND SENSOR NETWORK	Fall	2	Mon/3	14/201	②	OTSUKI, TOMOAKI
	02019	ADVANCED ACTUATOR ENGINEERING	Fall	2	Tue/2	online	③	TAKEMURA, KENJIRO
	11373	ADVANCED COURSE APPLICATION OF EXPERIMENTAL DESIGN	Fall	2	Fri/5	12/209	②	YAMADA, SHU
								OGIHARA, NAOMICHI TAKEMURA, KENJIRO
	00752	ADVANCED COURSE IN APPLIED AND COMPUTATIONAL MECHANICS 2	Fall	2	Mon/1	14/202	②	MATSUO, AKIKO FUKAGATA, KOJI ANDO, KEITA PENG, LINYU MURAMATSU, MAYU

Program	Code	Subject	Sem.	Cr.	Time	Room	Lecture Type	Professor
Science for Open and Environmental Systems	09013	ADVANCED COURSE IN DATABASE SYSTEMS	Spring	2	Fri/3	online	③	TOYAMA, MOTOMICHI
	03345	ADVANCED COURSE OF INTERNET BACKBONE ARCHITECTURE	Spring	2	Mon/2	14/204	②	YAMANAKA, NAOAKI
	09669	ADVANCED COURSE OF MOLECULAR DYNAMICS	Fall	2	Thu/2	online	③	YASUOKA, KENJI
	01778	ADVANCED COURSE ON COMPUTER VISUALIZATION	Spring	2	Thu/4	online	③	FUJISHIRO, ISSEI
	08256	ADVANCED COURSE ON DIGITAL COMMUNICATION THEORY	Spring	2	Tue/2	online	③	SASASE, IWAO
	08624	ADVANCED COURSE ON NATURAL LANGUAGE PROCESSING	Fall	2	Wed/2	online	③	OHARA, KYOKO
	03350	ADVANCED COURSE ON NETWORK ENGINEERING	Fall	2	Mon/4	12/106	②	TERAOKA, FUMIO
	00480	ADVANCED COURSE ON NETWORK SERVICES	Fall	2	Fri/2	12/105	②	KANEKO, KUNITAKE
		ADVANCED COURSE ON SUSTAINABLE ARCHITECTURE AND CITIES						Not offered in 2021
		ADVANCED COURSE ON TOTAL QUALITY MANAGEMENT						Not offered in 2021
	01854	ADVANCED FINANCIAL ENGINEERING 1	Spring	2	Tue/3	12/202C	①	IMAI, JUNICHI
	00331	ANALYSIS OF ARCHITECTURAL FORM	Fall	2	Fri/5	Online	③	ALMAZAN CABALLERO, JORGE
	08294	APPLIED STATISTICAL ANALYSIS	Fall	2	Mon/2	12/209	②	SUZUKI, HIDEO
		ARCHITECTURAL AND BUILDING DESIGN STUDIO B						Not offered in 2021
		BIOMECHANICS AND CONTROL OF HUMAN MOVEMENTS						Not offered in 2021
	09745	COMPRESSIBLE FLUID DYNAMICS	Spring Q1+1	2	Mon2/ Wed1	online	③	MATSUO, AKIKO
	08332	COMPUTER ARCHITECTURE	Spring	2	Thu/1	Online	③	AMANO, HIDEHARU
	00729	COMPUTER SCIENCE: EXERCISES	Fall	2	*3			TAKADA, SHINGO
	07188	COMPUTER VISION	Spring	2	Mon/5	online	③	SAITO, HIDEO
	03694	DESIGN OF PHYSICALLY GROUNDED COMMUNICATION SYSTEM	Spring	2	Fri/2	Online	③	IMAI, MICHITA
	08969	DISTRIBUTED SYSTEMS	Fall	2	Fri/5	online	③	MATSUTANI, HIROKI
		DYNAMICS IN ARCHITECTURAL ENGINEERING						Not offered in 2021
	09449	FINITE ELEMENT MODELING AND SIMULATION	Fall	2	Tue/1	Online	③	MURAMATSU, MAYU TAKANO, NAOKI
	08586	FORMAL PROGRAMMING LANGUAGE THEORY	Spring	2	Mon/4	14/B101	②	TAKIMOTO, MUNEHIRO
	00456	FUNDAMENTALS OF MULTIPHASE FLOW	Spring	2	Mon/3	online	③	ANDO, KEITA
	02482	FUNDAMENTALS OF TURBULENCE AND ITS THEORY	Spring	2	Fri/2	online	③	FUKAGATA, KOJI
	00877	INTERNSHIP	Spring	2	-	-	-	TAKADA, SHINGO
	00532	INTERNSHIP	Fall	2	-	-	-	TAKADA, SHINGO
	08878	INTRODUCTION TO COMPUTATIONAL SOLID MECHANICS	Spring	2	Tue/2	12/103	②	ISAKARI, HIROSHI
	02277	INTRODUCTION TO TURBULENCE MODEL AND ITS APPLICATION	Fall	2	Tue/5	12/209	②	OBI, SHINNOSUKE
	12590	MECHANICS AND NUMERICAL SIMULATION OF ADVANCED MATERIALS	Spring	2	Tue/2	online	③	MURAMATSU, MAYU
	02588	MICROPROCESSOR ARCHITECTURE	Fall	2	Thu/3	12/103	①	YAMASAKI, NOBUYUKI
	00494	MIXED REALITY	Spring	2	Mon/3	online	③	SUGIMOTO, MAKI
	08882	MODELING AND ANALYSIS OF STOCHASTIC SYSTEMS	Fall	2	Fri/4	Online	③	MASUDA, YASUSHI
	11369	MODELS FOR CONCURRENCY	Spring	2	*4	online	③	YOSHIDA, NOBUKO
	13141	NON-LINEAR DYNAMICS	Fall	2	Thu/5	12/206	②	PENG, RINYU
	00236	NON-LINEAR DYNAMICS IN CHEMICAL SYSTEM	Spring	2	Tue/1	online	③	ASAKURA, KOICHI
	01797	OPEN SYSTEMS MANAGEMENT: LECTURE AND EXERCISES	Fall	2	Thu/4,5 *5	14/211	②	IMAI, JUNICHI SUZUKI, HIDEO HIBIKI, NORIO MASUDA, YASUSHI MATSUKAWA, HIROAKI YAMAGUCHI, TAKAHIRA YAMADA, SHU KURIHARA, SATOSHI MATSUDA, SHUN
	01782	OPERATIONS MANAGEMENT	Fall	2	Mon/2	14/203	②	MATSUKAWA, HIROAKI
	07795	PUBLIC SPACE AND COMMUNICATION	Fall	2	Mon/5	12/106	②	INOUE, KYOKO
	08328	REAL WORLD INTERACTIVE SYSTEM	Fall	2	Tue/2	14/204	②	SUGIURA, YUTA
	11775	SOFTWARE ENGINEERING: DEVELOPMENT AND TESTING	Spring	2	Tue/5	12/101	②	TAKADA, SHINGO
		SYSTEMS PERFORMANCE EVALUATION						Not offered in 2021
	08241	THERMAL AND REACTIVE FLUID DYNAMICS	Spring	2	Fri/1	online	③	UEDA, TOSHIHISA
	08639	TOPICS IN COMPUTER OPERATING SYSTEMS	Spring	2	Tue/3	12/210	②	KONO, KENJI
Japanese	05568	JAPANESE 1A	Fall	1	Please see the Japanese Class Schedule for the latest information			
	03034	JAPANESE 1B	Fall	1				
	02755	JAPANESE 1C	Spring	1				
	03235	JAPANESE 1D	Spring	1				
	03240	JAPANESE 2A	Fall	1				
	05572	JAPANESE 2B	Spring	1				
	05630	JAPANESE 3A	Fall	1				
	03379	JAPANESE 3B	Spring	1				
	05644	JAPANESE 4A	Fall	1				
	03311	JAPANESE 4B	Spring	1				
	01012	JAPANESE ELEMENTARY CONVERSATION	Fall	1				
	00695	JAPANESE ELEMENTARY CONVERSATION 2	Fall	1				

\*1 Most courses are taught on a semester system, but the courses marked "Q1" "Q2" "Q3" or "Q4" are conducted on a quarter system which divides a semester into two halves.

Spring Q1 courses: April to May

Spring Q2 courses: first class day of the courses are as follows: Monday May 24, Tuesday May 25, Wednesday May 26, Thursday May 27, Friday May 28, Saturday May 29

Fall Q3 courses: September to mid-November

Fall Q4: first class day of the courses are as follows: Monday November 15, Tuesday Nov 16, Wednesday Nov 17, Thursday Nov 25, Friday Nov 12, Saturday Nov 13

Please confirm page 6-9 of the "Course Guidebook and Syllabus" for Academic Year class schedule.

\*2 "INTERNSHIP": Internship term is generally around three weeks or more. Please check the "Course Guidebook and Syllabus" in detail.

\*3 "COMPUTER SCIENCE: EXERCISES": This course does not have lectures.

\*4 "MODELS FOR CONCURRENCY": This is an intensive course. Lecture days are as follows: August 10 and 11 period 3 - 6, August 12 period 2 - 6

\*5 "OPEN SYSTEMS MANAGEMENT: LECTURE AND EXERCISES": Lecture days are as follows: Oct. 7 (4th Period only), Oct. 14, 28, Nov. 11, 25, Dec. 9, Jan. 13

[Type of Classes]

① : Classes held in Yagami Campus onsite

② : Classes held online and face-to-face in Yagami Campus (Combination)

③ : Classes held online

For more information, please attend the first class and check with the instructor.